APPENDIX B

Pre-Construction Mitigation Measures Tracking Table

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PRE-CONSTRUCTION MITIGATION MEASURES TRACKING TABLE

Table B-1 Pre-Construction Mitigation Measures and APMs

Category	Measure Requirement/Application
APM/Mitigation Measure Title	**Mitigation Measure Aesthetics-2: Retaining Wall Screening**
Measure Text	Retaining walls shall use blocks that accommodate plants along the wall face. The block color shall be similar in hue and value to the native soil or up to 2 shades darker. All retaining walls shall be planted with native, drought tolerant vegetation common to the area. SDG&E shall submit a retaining wall design and vegetation plan to the CPUC for review and approval. The retaining wall design shall show the planting pockets in the blocks and the color of the blocks for all project retaining walls. SDG&E shall not order or procure the blocks until CPUC approves the design and color of the blocks. The vegetation plan shall include a list of all species to be planted in the retaining walls and the container size for the plantings.
Location	Retaining walls at Structure P2 (adjacent to Sycamore Canyon Substation) and Structure P5 (near intersection of Stonebridge Parkway and Stonecroft Terrace Road)
Monitoring/Reporting Action	A retaining wall design and vegetation plan is prepared by SDG&E according to this mitigation measure and to the approval of the CPUC.
Effectiveness Criteria	Visual effects of retaining walls are minimized by using block color that are similar in hue and value to the native soil or up to 2 shades darker and have plants growing along the retaining wall.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Aesthetics-3: Facilities Color Treatment Plan**
Measure Text	SDG&E shall prepare a Facilities Color Treatment Plan describing the application of colors to all new structures. The proposed color treatments shall minimize visual intrusion and contrast by matching the new structure's color to the adjacent existing structures and surroundings. Ancillary structures shall use colors that are congruent with the landscape in which they are proposed. Color treatments shall reduce new structure contrast making new structures less noticeable. The Plan shall be submitted to CPUC for review and approval at least 90 days prior to ordering the first structure to be color treated. The Facilities Color Treatment Plan shall include: • Specification, and 11 x 17-inch color simulations at real-world scale, of the treatment proposed for use on project structures from identified KOPs. Structures include TSPs, retaining wall faces, and fences for cable poles and staging areas. • List of each major project structure, specifying the color and finish proposed. • Two sets of brochures and/or color chips for the proposed color for each project element. • A detailed schedule for completion of the treatment. • A procedure to ensure proper treatment maintenance for the life of the project. SDG&E shall not specify to the vendors the treatment of any structures treated

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	during manufacture or perform the final treatment on any structures treated onsite during construction until SDG&E receives notification of approval of the Color Treatment Plan by the CPUC.
Location	New poles and structures
Monitoring/Reporting Action	A Facilities Color Treatment Plan is prepared by SDG&E according to the provisions identified in this mitigation measure and to the approval of the CPUC.
Effectiveness Criteria	Minimize visual intrusion and contrast by implementing the Facilities Color Treatment Plan.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Aesthetics-4: Cable Pole Screening**
Measure Text	SDG&E shall prepare a Landscape Plan that details the landscape treatment and fence design around the cable poles. The Landscape Plan shall include vegetation to screen the base of the cable pole and fence to the extent feasible. Vegetation around the cable pole shall consist of container plantings due to the need to visually screen the cable pole. The vegetation type selected shall be drought-tolerant and compatible with the surrounding vegetation communities. Within City of San Diego Open Space Parks, vegetation shall consist of locally native species and shall be approved by the City of San Diego's MSCP Biologist. SDG&E shall submit the Landscape Plan to the CPUC for review and approval at least 60 days prior to construction of the cable pole. No work shall be conducted at the cable pole prior to CPUC approval of the Landscape Plan.
Location	Cable pole locations (Structures P5 and CC MM)
Monitoring/Reporting Action	SDG&E shall prepare a Landscape Plan that defines vegetation for screening of the cable poles. The Landscape Plan shall be prepared to the approval of the CPUC.
Effectiveness Criteria	The cable poles are visually screened with drought-tolerant vegetation.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Agriculture-1: Coordinate with the Evergreen Nursery Property Management**
Measure Text	SDG&E shall coordinate the following actions with the Evergreen Nursery property manager no less than 30 days prior to development of the Evergreen Nursery Staging Yard and conductor stringing activities in Segment C: • Coordinate the location of the staging yard to a mutually suitable position within the approximately 50-acre nursery operation • Communicate conductor stringing activities on the site, such as the anticipated schedule for staging activities and conductor stringing • Communicate potential disruptions from construction activities (e.g., noise, dust, traffic, and access restrictions)

Category	Measure Requirement/Application
	• Communicate safety considerations for nursery staff and patrons (e.g., avoidance areas and the use of signs and barriers). • SDG&E shall provide verification of completed preconstruction conditions to the CPUC. Documentation shall be submitted to CPUC verifying condition and communication requirements. Following the completion of staging and conductor stringing at the site, SDG&E shall coordinate with the Evergreen Nursery property manager to ensure that sites used for staging within the nursery are returned to near pre-construction conditions.
Location	Evergreen Nursery Staging Yard
Monitoring/Reporting Action	SDG&E shall submit documentation of their coordination with Evergreen Nursery.
Effectiveness Criteria	Minimize disruptions to Evergreen Nursery operations.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Air-3: Dust Control Management Plan**
Measure Text	SDG&E shall submit a Dust Control Management Plan to the CPUC for review and approval no less than 30 days prior to construction. The Dust Control Management Plan shall contain measures that provide for conformance to SDAPCD Rule 55 requirements including: 1. No person shall engage in construction or demolition activity in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period; and 2. Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall: a. Be minimized by the use of any of the following or equally effective track-out/carry-out and erosion control measures that apply to the project or operation: track-out gates or gravel beds at each egress point, wheel-washing at each egress during muddy conditions, soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; and for outbound transport trucks: using secured tarps or cargo covering, watering, or treating of transported material; and b. Be removed at the conclusion of each work day when active operations cease, or every 24 hours for continuous operations. If a street sweeper is used to remove any track-out/carry out, only PM10-efficient street sweepers certified to meet the most current South Coast Air Quality Management District Rule 1186 requirements shall be used. The use of blowers for removal of track-out/carry-out is prohibited under any circumstances. Measures to comply with visible dust emissions restrictions could include: • Watering or applying soil stabilizers to areas with loose dust • Ceasing earthmoving activities when sustained (i.e., a period or periods of time aggregating more than 3 minutes in any 60-minute period) wind speed exceeds 20 miles per hour

Category	Measure Requirement/Application
	• Covering soil stockpiles
Location	All areas of earth disturbance and all sources of fugitive dust generated by the project, such as on roadways and trucks transporting materials
Monitoring/Reporting Action	SDG&E prepares a Dust Control Management Plan that addresses SDAPCD Rule 55 requirements and is prepared to the approval of the CPUC.
Effectiveness Criteria	Fugitive dust is controlled in compliance with SDAPCD Rule 55 requirements.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Biology-1b: Environmental Training Program**
Measure Text	An environmental training program (ETP) shall be developed and presented to all crew members prior to the beginning of all project construction. The training shall describe special-status plant and wildlife species and sensitive habitats that could occur within project work areas, protection afforded to these species and habitats, and avoidance and minimization measures required to avoid and/or minimize impacts from the project. Penalties for violations of environmental laws shall also be incorporated into the training session. Each crewmember shall be provided with an informational training handout and a decal to indicate that he/she has attended the training. The roles and responsibilities of CPUC-, USFWS-, and CDFW-approved biologist(s) and other environmental representatives shall be identified in the Mitigation Monitoring, Compliance, and Reporting Program and discussed during the training. All new construction personnel shall receive this training before beginning work on this project. A copy of the training and training materials shall be provided to CPUC for review and approval at least 30 days prior to the start of construction. Training logs and sign-in sheets shall be provided to CPUC on a monthly basis. As needed, in-field training shall be provided to new on-site construction personnel by the environmental compliance supervisor or a qualified individual who shall be identified by SDG&E's Project Biologist, or initial training shall be recorded and replayed for new personnel.
Location	All work areas
Monitoring/Reporting Action	SDG&E prepares an environmental training program that includes special-status plants and wildlife that could occur in the work area, protections afforded to these species, and penalties for violations. The training program shall be prepared to the approval of the CPUC, and may be incorporated into the more encompassing Safety and Environmental Awareness Program (SEAP) for the Project.
Effectiveness Criteria	All workers receive environmental training prior to construction and understand the environmental requirements and sensitive resources associated with the project.
Status	
Review/Approval	
APM/Mitigation	**Mitigation Measure Biology-1c: Pre-Activity Surveys**

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Category	Measure Requirement/Application
Measure Title	
Measure Text	The CPUC-, USFWS-, and CDFW-approved biologist(s) shall conduct a pre-activity survey for all activities occurring off of access roads in sensitive habitats. The pre-activity survey shall be conducted no earlier than 30 days prior to surface disturbance. The results of the pre-activity survey shall be documented by the Qualified Biologist in a pre-activity survey report. The pre-activity survey report shall be submitted to the CPUC for review and approval prior to the start of construction, and the results shall be submitted to CDFW and USFWS as required by any regulatory permits or approvals. The pre-activity study report shall include the following: • Type, location, and size of project • Date, time, weather, surrounding land uses • Evaluation of type and quality of habitat • Work description and methods which will be used to avoid or minimize ground disturbance, including biological monitoring during construction • Anticipated impacts and proposed mitigation • Map of location of work area In those situations where the Qualified Biologist cannot make a definitive species identification, the Qualified Biologist shall make a determination based on the available evidence and professional expertise. In order to ensure that habitats are not inadvertently impacted, the CPUC-, USFWS-, and CDFW-approved biologist shall flag boundaries of habitat which must be avoided. When necessary, the CPUC-, USFWS-, and CDFW-approved biologist shall also demark appropriate equipment laydown areas, vehicle turn around areas, and pads for placement of large construction equipment such as cranes, bucket trucks, augers, etc. When appropriate, the CPUC-, USFWS-, and CDFW-approved biologist shall make office and/or field presentations to field staff to review and become familiar with natural resources to be protected on a project site-specific basis. Avoidance of habitat for thread-leaved brodiaea is prioritized over minimization and mitigation. SDG&E shall maintain a library of special-status plant species locations, known to SDG&E, occurring within the project BSA. "Known" means a verified population either extant or documented using record data. Information on known sites may come from a variety of record data sources including local agency Habitat Conservation Plans, pre-activity surveys, or biological surveys conducted for environmental compliance of the project. Plant inventories shall be consulted as part of pre-activity survey procedures.
Location	All work areas within sensitive habitats
Monitoring/Reporting Action	Pre-activity surveys and reports are completed by a Qualified Biologist; survey reports are filed with the CPUC, CDFW, and USFWS. Verify that habitat areas including thread-leaved brodiaea habitat are appropriately flagged for avoidance.
Effectiveness Criteria	Sensitive habitats and special-status plants are avoided to the extent feasible.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Biology-1d: Maintenance, Repair, and Construction of Facilities**

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Category	Measure Requirement/Application
Measure Text	SDG&E shall implement the following measures pertaining to maintenance, repair, and construction of facilities: 1. *See construction and operation and maintenance.* 2. *See operation and maintenance.* 3. *See construction.* 4. *See construction and operation and maintenance.* 5. When siting new facilities, every effort shall be made to cross wetland habitat perpendicular to the watercourse, spanning the watercourse to minimize the amount of disturbance to riparian area. 6. *See construction and operation and maintenance.* 7. *See construction and operation and maintenance.* 8. *See construction and operation and maintenance.* 9. The CPUC-, USFWS-, and CDFW-approved biologist shall approve of an activity prior to working in any natural area where disturbance to habitat may be unavoidable. 10. *See operation and maintenance.* 11. *See operation and maintenance.* 12. *See construction.* 13. *See construction and operation and maintenance.* 14. *See operation and maintenance.* 15. The CPUC-, USFWS-, and CDFW-approved biologist shall be contacted to perform a pre-activity survey when vegetation trimming is planned in sensitive habitats. Whenever possible, trees in sensitive habitats such as native riparian, woodland, or scrub vegetation shall be scheduled for trimming in non-sensitive times (i.e., outside of breeding or nesting seasons). 16. No new facilities and activities shall be planned that would disturb vernal pools, their watersheds, or impact their natural regeneration. Continued historic maintenance of existing infrastructure utilizing existing access roads shall be allowed to continue in areas containing vernal pool habitat, provided no such habitat located within these roads would be impacted by project activities. New construction of overhead infrastructure which spans vernal pool habitats shall be allowed as long as the placement of facilities or the associated construction activities in no way impact the vernal pools. 17. *See construction.* 18. *See construction.* 19. *See operation and maintenance.* 20. *See construction.* 21. *See construction.* 22. *See construction.* 23. *See operation and maintenance.*
Location	Sensitive natural areas and vernal pools
Monitoring/Reporting Action	SDG&E makes every effort to cross streams perpendicularly, notifies the USFWS and/or CDFW prior to performing any work in sensitive natural areas where disturbance to habitat may be unavoidable, trim trees in sensitive habitats

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	during non-sensitive times, and does not plan any activities or facilities within or near vernal pools.
Effectiveness Criteria	Impacts to riparian areas and sensitive natural areas are minimized, and new facilities and activities avoid impacts on vernal pools.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Biology-1g: Survey Work Protocols**
Measure Text	SDG&E shall implement the follow measures during survey work: • SDG&E survey personnel shall keep vehicles on existing access roads. No clearing of brush shall be allowed from February through September without prior approval from the CPUC-, USFWS-, and CDFW-approved biologist, who will ensure the brush clearing activity, does not adversely affect a special-status species or nesting birds. • Hiking off roads or paths for survey data collection shall be allowed year-round as long as other protocols are met.
Location	Areas requiring pre-construction surveys
Monitoring/Reporting Action	Verify that surveyors keep to existing access roads.
Effectiveness Criteria	All survey personnel keep vehicles on existing access roads.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Biology-3: Weed Control Plan**
Measure Text	SDG&E shall prepare and implement a comprehensive, adaptive Weed Control Plan for pre-construction and long-term invasive, non-native species abatement. Developed land shall be excluded from weed control. Where SDG&E owns the property, the Weed Control Plan shall include specific weed abatement methods, practices, and treatment timing developed specifically for the Project area by qualified individuals with at least 5 years of weed control experience within San Diego County. The Weed Control Plan shall address control methods and issues controlling invasive non-native species within all vegetation communities and land cover types found along the Project alignment. On ROW easement on MCAS Miramar, the Weed Control Plan shall incorporate all appropriate and legal U.S. Marine Corps-stipulated regulations. The Weed Control Plan shall be submitted to MCAS Miramar for final authorization of weed control methods, practices, and timing prior to implementation of weed control on MCAS Miramar. The Weed Control Plan shall be submitted to the City of San Diego for final authorization of weed control methods, practices, and timing prior to implementation of any weed control within the City of San Diego MHPA. The Weed Control Plan shall include the following: • A pre-construction weed inventory shall be conducted by surveying the entire ROW and areas immediately adjacent to the ROW where access permission is obtained, as well as at all ancillary facilities associated with

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	the Project for weed populations that: (1) are considered by the San Diego County Agriculture Commissioner, MCAS Miramar (for ROW on MCAS Miramar), or City of San Diego (for ROW within the City of San Diego MHPA) as being a priority for control, (2) are weed populations that are rated High or Moderate for negative ecological impact in the California Invasive Plant Inventory (online) Database (Cal-IPC 2006 [and 2007 update]; http://www.cal-ipc.org/ip/ inventory/ index.php) or are weed species of concern to MCAS Miramar (for ROW on MCAS Miramar), and (3) aid and promote the spread of wildfires in San Diego County. • Prolific wildfire-promoting species such as brome grasses (Bromus sp.) shall be mapped but not targeted for control outside of Project impact areas. These populations shall be mapped and described according to density and area covered. These plant species shall be treated prior to construction or at a time when treatments would be most effective based on phenology according to control methods and practices for invasive weed populations included in the Weed Control Plan or required by MCAS Miramar or City of San Diego. • Weed control treatments shall include all legally permitted methods to be used in the following prioritized order: preventative, manual, mechanical, and chemical. • All treatments shall be applied with the authorization of the, MCAS Miramar and City of San Diego as appropriate. • The application of herbicides shall be in compliance with all state and federal laws and regulations under the prescription of a Pest Control Advisor (PCA) and implemented by a Licensed Qualified Applicator. • Where manual and/or mechanical methods are used, disposal of the plant debris will be within an approved landfill area within San Diego County. • The timing of the weed control treatment shall be determined for each plant species in consultation with the PCA for the Project, and with MCAS Miramar, and City of San Diego as appropriate, with the goal of controlling populations before they start producing seeds.
Location	Areas of earth disturbance where weeds could establish
Monitoring/Reporting Action	SDG&E shall prepare and submit a weed control plan that defines specific weed abatement methods, practices, and treatment timing. The weed control plan will be prepared to the approval of the CPUC.
Effectiveness Criteria	Weeds are controlled to baseline levels in areas of temporary disturbance.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Biology-5: Pre-Activity Surveys for Quino Checkerspot Butterfly (QCB)**
Measure Text	SDG&E shall conduct a pre-activity survey for QCB in all project work areas and along all project access roads within the current USFWS survey area for QCB (USFWS 2014b) to determine areas of suitable QCB habitat. In areas where no suitable QCB habitat is found during the pre-activity survey, construction may occur at any time, consistent with the HCP for the QCB (i.e., the operational protocols in the 1995 Subregional NCCP), and no QCB

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	mitigation shall be required. If suitable QCB habitat is present, and construction cannot avoid the suitable habitat, then one of the following shall occur: • A USFWS protocol, adult, flight-season survey for the QCB shall be conducted by an individual that holds a recovery permit for the QCB pursuant to section 10(a)(1)(A) of the ESA. • The survey shall be conducted within suitable QCB habitat areas to determine whether or not the habitat is occupied by QCB. • In areas where there is no QCB detected, construction activities may proceed without further review, and the suitable QCB habitat shall be mitigated at a 1:1 ratio per the methods in the HCP for the QCB. • If QCB are detected, efforts shall be made to avoid impacts to the occupied habitat. Impacts to occupied habitat shall be mitigated at a 2:1 ratio per the methods in the HCP for the QCB. • If the timing of the project will not allow for an adult, flight-season surveys to determine the presence or absence of QCB, presence of QCB will be assumed in all suitable habitats, and mitigation for impacts shall occur at a 2:1 ratio per the methods in the HCP for the QCB. • If impacts to occupied QCB habitat (as determined by surveys or where QCB presence is assumed) are greater than one acre, SDG&E shall confer with USFWS to ensure that the activity's impact will not cause the permanent loss of QCB habitat.
Location	Within suitable QCB habitat
Monitoring/Reporting Action	Prepare survey reports for QCB protocol adult flight season surveys documenting surveys within all suitable habitat areas for QCB; verify surveys were appropriately completed and impacts are mitigated as required by the HCP.
Effectiveness Criteria	Suitable QCB habitat is mapped and impacts on QCB habitat are mitigated as required by the HCP.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Biology-6: Compensatory Mitigation for Impacts to Habitat**
Measure Text	SDG&E shall restore temporarily impacted areas following construction according to the performance criteria described below and/or shall purchase/dedicate suitable habitat for preservation to off-set permanently impacted areas. Restoration of some vegetation communities in temporarily impacted areas may not be possible if those areas are subject to vegetation management to maintain proper clearance between transmission lines and vegetation, for example. In those instances, the mitigation shall consist of off-site acquisition and preservation of the vegetation community. Restoration of temporarily impacted areas involves recontouring the land, replacing the topsoil (if it was collected), planting seed and/or container stock, maintaining (i.e., weeding, replacement planting, supplemental watering, etc.), and monitoring the restored area for a period of 5 years or until year 5 success criteria are met. SDG&E shall prepare a Habitat Restoration Plan that shall be subject to

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approval by the CPUC, USFWS, CDFW, City of San Diego (for restoration within City of San Diego MHPA), and MCAS Miramar (for restoration on MCAS Miramar) prior to habitat impacts. Required mitigation ratios are provided by habitat type in Table 4.1-10. In cases where the impacts to sensitive vegetation communities occur in the City of San Diego MHPA, the mitigation shall also occur in the MHPA. The Habitat Restoration Plan shall also identify, if applicable, the potential for reintroduction and/or increasing MSCP-covered species populations within habitat restoration areas if those covered species were affected by the Proposed Project.

Table 4.1-10 Required Habitat Mitigation Ratios

Vegetation Community	Mitigation Ratio	
	Temporary	Permanent[1]
Diegan Coastal Sage Scrub		
Diegan coastal sage scrub	1:1	1:1
Diegan coastal sage scrub in the MHPA	1:1	2:1
Diegan coastal sage scrub-Disturbed	1:1	1:1
Diegan coastal sage scrub-Disturbed in the MHPA	1:1	2:1
Diegan coastal sage scrub-Revegetated	1:1	1:1
Diegan coastal sage scrub-Revegetated in the MHPA	---	2:1
Coastal Sage Scrub		
Coastal sage-chaparral scrub	0.5:1	1:1
Coastal sage-chaparral scrub in the MHPA	1:1	2:1
Chaparral		
Chamise chaparral	0.5:1	1:1
Chamise chaparral in the MHPA	1:1	2:1
Chamise chaparral-disturbed	0.5:1	1:1
Chamise chaparral-disturbed in the MHPA	1:1	2:1
Scrub oak chaparral	1:1	1:1
Scrub oak chaparral in the MHPA	2:1	2:1
Southern mixed chaparral	0.5:1	1:1
Southern mixed chaparral in the MHPA	1:1	2:1
Southern mixed chaparral-disturbed	0.5:1	1:1

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	Southern mixed chaparral-disturbed in the MHPA	1:1	2:1
	Grassland		
	Native grassland	1:1	1:1
	Native grassland in the MHPA	2:1	2:1
	Non-native grassland	0.5:1	1:1
	Non-native grassland in the MHPA	---	2:1
	Freshwater Marsh		
	Freshwater marsh	---	1:1
	Vernal Pool		
	San Diego Mesa Vernal Pool	3:1	3:1
	Riparian		
	Southern riparian scrub	---	1:1
	Mule fat scrub	---	1:1
	Mulefat scrub in MHPA	---	2:1
	Southern willow scrub	---	1:1
	Southern willow scrub in MHPA	---	2:1
	Tamarisk scrub in MHPA	---	2:1
	Southern coast live oak riparian forest	---	1:1
	Southern coast live oak riparian forest in MHPA	---	2:1

Note:

[1] Mitigation ratios for permanent impacts are consistent with SDG&E's NCCP; 1:1 for permanent impacts outside a preserve and 2:1 for permanent impacts inside a preserve.

The Restoration Plan shall include the following performance criteria:

- Percent cover and composition shall be similar to the conditions of a nearby reference site, defined as variation of no more than 10 percent absolute cover from the reference site cover and species composition condition.
- Maintenance and monitoring for restoration shall be for 5 years or until success criteria are met. Compensation planting areas shall be monitored eight times in Year 1, six times per year in Years 2 and 3, and 4 times per year in Years 4 and above.
- Compensation planting areas shall be monitored for invasive plants in the first 5 years following replanting. Invasive plant monitoring shall occur eight times in Year 1, six times per year in Years 2 and 3, and 4 times per year in Years 4 and 5. If invasive plants are found during the 5-year monitoring

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	period, they shall be removed as necessary to support meeting the cover and vegetation composition success criteria. • If the restoration fails to meet the established success criteria after the maintenance and monitoring period, maintenance and monitoring shall extend beyond the 5-year period until the criteria are met or unless otherwise approved by the CPUC. • Maintenance and monitoring shall be conducted following a prescribed schedule to assess progress and identify potential problems with the restoration. Remedial action (e.g., additional planting, weeding, erosion control, use of container stock, supplemental watering, etc.) shall be taken by an experienced, licensed Habitat Restoration Contractor during the maintenance and monitoring period if necessary to ensure the success of the restoration. Any impacts associated with unauthorized activity (e.g., exceeding approved construction footprints or implementing the Habitat Management Plan after the allowed timeframe of 18 months following the initiation of any vegetation disturbing activities) shall be mitigated at a 5:1 ratio. Restoration of the unauthorized impacts shall be credited at a 1:1 ratio (i.e., mitigated by in-place habitat restoration); the remaining 4:1 shall be acquired and preserved off-site. For areas where habitat restoration cannot meet mitigation requirements, as determined by the Habitat Restoration Specialist in coordination with CPUC, USFWS, CDFW, and MCAS Miramar (for restoration on MCAS Miramar), off-site purchase and dedication of habitat (or as otherwise prescribed by MCAS Miramar for restoration on MCAS Miramar) shall be provided at the mitigation ratios provided in Table 4.1-10. ***Mitigation Parcels/Habitat Management Plans.*** All off-site mitigation parcels shall be approved by the CPUC, USFWS, CDFW and MCAS Miramar (as applicable) and must be acquired, or their acquisition must be assured. To demonstrate that such parcels will be acquired, SDG&E shall submit a Habitat Acquisition Plan at least 120 days prior to any ground disturbing activities for CPUC, USFWS, CDFW, and MCAS Miramar (as applicable) review and approval. The Habitat Acquisition Plan shall include, but shall not be limited to: • Legal descriptions and maps of all parcels to be acquired; • Schedule that includes phasing relative to impacts; • Documentation demonstrating that the mitigation parcel(s) provides high quality habitat roughly equivalent in composition to the habitats that would be impacted by the project and at appropriate acreages; • Timing of conservation easement recording; • Initiation of habitat management activities relative to acquisition; and • Assurance mechanisms (e.g., performance bonds to assure adequate funding) for any parcels not actually acquired prior to vegetation disturbing activities. A Habitat Management Plan shall be prepared by a biologist and approved by the CPUC, USFWS, CDFW, and MCAS Miramar (as applicable) for all acquired off-site mitigation parcels. The Habitat Management Plan must be approved in writing by these agencies (as applicable) within 18 months of the initiation of any vegetation disturbing activities. The Habitat Management Plan shall provide direction for the preservation and in-perpetuity management of all acquired, off-site mitigation parcels. The Habitat Management Plan shall include, but shall not be limited to:

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	• Adequate SDG&E funding for the preparation and implementation of the HMP • Legal descriptions of all mitigation parcels approved by the CPUC, USFWS, CDFW, and MCAS Miramar (for mitigation parcels to be acquired for MCAS Miramar impacts) • Baseline biological data for all mitigation parcels • Designation of a land management entity approved by the CPUC, USFWS, CDFW, and MCAS Miramar (for mitigation parcels to be acquired for MCAS Miramar impacts) to provide in-perpetuity management • A Property Analysis Record prepared by the designated land management entity that explains the amount of funding required to implement the Habitat Management Plan • Designation of responsible parties and their roles (e.g., provision of endowment by SDG&E to fund the Habitat Management Plan and implementation of the Habitat Management Plan by the designated land management entity) Management specifications including, but not limited to, regular biological surveys to compare with the baseline data; invasive, non-native species control; fence/sign replacement or repair; public education; trash removal; and annual reports to CPUC, USFWS, CDFW, and MCAS Miramar (for mitigation parcels to be acquired for MCAS Miramar impacts)
Location	Sensitive habitat areas
Monitoring/Reporting Action	SDG&E shall provide documentation describing how these requirements are satisfied through compliance with the NCCP and/or prepare the following plans: • Restoration Plan • Habitat Acquisition Plan • Habitat Management Plan Plans or documentation shall be prepared to the approval of the CPUC, USFWS, CDFW, and City of San Diego.
Effectiveness Criteria	Areas of temporary habitat impact are restored to pre-construction conditions. Permanent impacts are mitigated through off-site land preservation in comparable habitats at the approved mitigation ratio.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Biology-7: Mitigation for Bird Species**
Measure Text	This measure applies to all work areas in which any construction-related activities must be conducted during the nesting bird season (generally between January 15 and August 31, but may be earlier or later depending on species, location, and weather conditions). ***Nesting Bird Survey Requirements.*** If work is scheduled to occur during the avian nesting season, nesting bird surveys shall be conducted according to the following provisions: 1. Nest surveys shall occur within 5 days prior to the start of ground-disturbing construction or vegetation trimming or removal activities. If

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	there is no work in an area for 7 days, it shall be considered a new work area if construction, vegetation trimming, or vegetation removal begins again. 2. Surveys shall be conducted with sufficient survey duration and intensity of effort necessary for the identification of active nests, which is defined as once birds begin constructing, preparing, or using a nest for egg-laying. A nest is no longer an "active nest" if abandoned by the adult birds or once fledglings are no longer dependent on the nest". Surveys shall include nests of protected species within vegetation identified for removal and/or pruning, and within the following buffers of active work areas: 0.25-mile buffer for white-tailed kite; 500-foot buffer for other raptor species. 3. Surveys shall be conducted during locally appropriate dates for nesting seasons determined in consultation with the USFWS and CDFW; note that generally the season is between January 15 and August 31 but may be earlier or later depending on species, location, and weather conditions. Species-specific nesting seasons for some species are identified below. 4. The surveys shall be conducted by a CPUC, USFWS-, and CDFW-approved qualified biologist. 5. Survey results shall be provided to CPUC, USFWS, and CDFW prior to initiating construction activities. 6. Work areas within which significant noise is not generated, such as work performed manually, by hand or on foot, and/or that would not cause significant disturbances to nesting birds (e.g., operating switches, driving on access roads, normally occurring activities at substations, and activities at staging and laydown areas) do not need to be surveyed prior to use. None of these activities shall result in physical contact with a nest.
Location	All work areas in the vicinity of suitable habitat for nesting birds
Monitoring/Reporting Action	SDG&E submits pre-construction surveys results to CPUC, USFWS, and CDFW; verify all surveys are performed by a qualified biologist.
Effectiveness Criteria	SDG&E performs surveys to establish buffers and avoid nest abandonment as a result of construction activities.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Biology-8: Burrowing Owl Monitoring and Mitigation Plan**
Measure Text	SDG&E shall prepare a Burrowing Owl Monitoring and Mitigation Plan (BOMMP) consistent with the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012). SDG&E shall submit the Draft BOMMP to CDFW and CPUC. SDG&E shall be required to obtain approval from CDFW on the BOMMP prior to construction. SDG&E shall provide the approved BOMMP to the CPUC 30 days prior to construction. In accordance with the Staff Report on Burrowing Owl Mitigation (CDFW 2012) and CDFW-approved BOMMP, SDG&E shall conduct a pre-construction take avoidance survey for the burrowing owl prior to initiating ground disturbance activities. In areas where owl presence is not found, construction may proceed

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	without further mitigation. If western burrowing owl occupancy on site is confirmed during pre-construction take avoidance surveys, SDG&E shall implement the CDFW-approved Burrowing Owl Monitoring and Mitigation Plan in coordination with CDFW.
Location	Within suitable habitat for burrowing owl
Monitoring/Reporting Action	SDG&E prepares a BOMMP to the approval of CDFW and CPUC. Pre-construction take avoidance survey reports are provided to the CPUC.
Effectiveness Criteria	Avoidance of occupied burrows and surrounding foraging area to the extent feasible; successful passive relocation, if required.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Biology-9: San Diego Desert Woodrat Mitigation**
Measure Text	A CPUC-approved Qualified Biologist shall conduct a preconstruction survey to identify potential San Diego desert woodrat houses within the project work areas and within 5 feet of the edge of the work areas to avoid direct take of woodrats. All woodrat houses shall be documented and reported through the MMCRP. Woodrat houses found within the work site or within 5 feet from a work site shall be flagged or fenced for avoidance. If impacts to a woodrat house located within a work site are unavoidable, a CPUC-approved Qualified Biologist, prior to construction and outside of the breeding season (April through June), shall dismantle the house by hand, removing the materials layer by layer to allow for adult woodrats to escape. If young are present and found during the disassembling process, the CPUC-approved Qualified Biologist shall leave the site for at least 24 hours to allow for the rats to relocate their young on their own. This step shall be repeated as needed until the young have been relocated by the parent woodrats. Once the nest is vacant, the disassembly process shall be completed and the nest sticks shall be collected and moved to another suitable nearby location to allow for nest reconstruction. Piles of cut vegetation/slash shall be retained near the work site prior to nest dismantling to provide refuge for woodrats that may become displaced.
Location	Within suitable habitat for San Diego desert woodrat
Monitoring/Reporting Action	SDG&E submits pre-construction survey report including documentation of any occurrence of woodrat houses. Verify that woodrat houses within 5 feet of the work area have been flagged for avoidance or the woodrat house has been appropriately dismantled if avoidance is infeasible.
Effectiveness Criteria	Direct impacts to the San Diego Wood Rat are minimized. Avoidance of occupied nests and surrounding foraging area, successful nest dismantling/passive relocation, if required.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Biology-10: Mitigation for Special-Status Bat Species**
Measure Text	Prior to construction, suitable special-status bat habitat shall be assessed by a

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	CPUC- and CDFW-approved, Qualified Biologist in trees within a 50-foot buffer of active work areas and in any structures with suitable special-status bat roosting habitat within a 100-foot buffer of active work areas (e.g., bridges). If an active special-status bat maternity roost is found in a tree or structure, the approved biologist shall define an appropriate limited or no-work exclusion buffer surrounding the special-status bat maternity roost. The limited work or exclusion areas shall remain in effect until the approved biologist determines that the work would no longer be a disturbance to the roost. A reduction in the buffer may be approved by the Qualified Biologist if there is a change in the type of work to be conducted. The limited work or exclusion buffer shall not apply to construction-related traffic using existing roads where the use of such roads is not limited to project-specific use (i.e., county roads, highways, farm roads, or other private roads) and shall not apply if the roost(s) is/are located in a residential, commercial, or industrial area. The boundaries of the limited or no work buffer shall be clearly marked by the approved biologist. The approved biologist shall inspect construction and roost sites when construction is occurring to ensure the integrity of the limited or no-work buffer and to ensure that the size of the buffer is adequate based on site conditions and construction-generated noise, dust, etc. All bat roosts documented during pre-construction surveys shall be reported through the MMCRP.
Location	Areas within 100 feet of suitable roosting habitat for special-status bats
Monitoring/Reporting Action	Suitable habitat for special-status bat habitat within 100 feet of work areas is surveyed for active maternity roosts. All bat roosts documented during surveys are reported to the CPUC. Verify that exclusions are appropriately marked and implemented.
Effectiveness Criteria	Successful avoidance of impacts to special-status bat maternity roosts.
Status	
Review/Approval	
APM/Mitigation Measure Title	**APM BIO-1: Minimization of Impacts to Special-Status Plants**
Measure Text	Implementation of the following measures will ensure impacts to special-status plant species remain less than significant: • Prior to construction, SDG&E shall retain a Qualified Biologist to conduct focused, special-status plant surveys during the spring and summer 2015 in suitable habitats where focused plant surveys were not previously conducted. • Locations of special-status plants shall be identified and inventoried. • Impacts to special-status plant species shall be avoided to the maximum extent possible by installing fencing or flagging, marking areas to be avoided in construction areas, and limiting work in areas identified as having special-status plant species to periods of time when the plants have set seed and are no longer growing. Where impacts to special-status plant species are unavoidable, the impact shall be quantified and compensated through off-site land preservation, plant salvage, transplantation, or other appropriate methods as determined by the Qualified Biologist. Alternatively, if the special-status plant species in

Category	Measure Requirement/Application
	question is a SDG&E Subregional NCCP covered species, mitigation consistent with measures established in the NCCP and discussed in the SDG&E Subregional NCCP, above, shall be provided.
Location	All areas containing suitable habitat for special-status plants.
Monitoring/Reporting Action	Qualified biologist will conduct pre-construction surveys and submit special-status plant inventory to CPUC. Verify that special-status species are marked for avoidance and/or mitigation is completed consistent with the SDG&E Subregional NCCP.
Effectiveness Criteria	Impacts to special-status plants are reduced by surveying, identifying special-status plant locations, fencing, flagging areas to be avoided, and compensatory mitigation.
Status	
Review/Approval	
APM/Mitigation Measure Title	**APM BIO-2: SDG&E Subregional NCCP**
Measure Text	The Proposed Project will avoid and minimize impacts to biological resources through implementation of the SDG&E Subregional NCCP. The SDG&E Subregional NCCP establishes a mechanism for addressing biological resource impacts incidental to the development, maintenance, and repair of SDG&E facilities within the SDG&E Subregional NCCP coverage area. The Proposed Project is located within the SDG&E Subregional NCCP coverage area. The SDG&E Subregional NCCP includes a Federal Endangered Species Act (ESA) Section 10(A) permit and a California ESA Section 2081 memorandum of understanding (for incidental take) with an Implementation Agreement with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW – formerly the California Department of Fish and Game), respectively, for the management and conservation of multiple species and their associated habitats, as established according to the Federal and State ESAs and California's NCCP Act. The NCCP's Implementing Agreement confirms that the mitigation, compensation, and enhancement obligations contained in the Agreement and the SDG&E Subregional NCCP meet all relevant standards and requirements of the California ESA, the Federal ESA, the NCCP Act, and the Native Plant Protection Act with regard to SDG&E's activities in the Subregional Plan Area. Pursuant to the SDG&E Subregional NCCP, SDG&E will conduct pre-construction studies for all activities occurring off of existing access roads in natural areas. An independent biological consulting firm will survey all Proposed Project impact areas and prepared a Pre-Activity Study Report (PSR) outlining all anticipated impacts related to the Proposed Project. The Proposed Project will include monitoring for all project components, as recommended by the PSR and outlined in the SDG&E Subregional NCCP, as well as other avoidance and minimization measures outlined in the NCCP's Operational Protocols. The PSR will be submitted to the CDFW and USFWS for review. Prior to the commencement of construction, a verification survey will be conducted of the Proposed Project disturbance areas, as required by the SDG&E Subregional NCCP. Specific operating restrictions that are incorporated into the Proposed Project design to comply with the SDG&E Subregional NCCP include the following:

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	• All SDG&E personnel would participate in an environmental training program conducted by SDG&E, with annual updates (Section 7.1.2, 11.). • The Environmental Surveyor shall conduct pre-activity studies for all activities occurring in natural areas, and will complete a pre-activity study form including recommendations for review by a biologist and construction monitoring, if appropriate. The form will be provided to CDFW and USFWS but does not require their approval (Section 7.1.3, 13.). • The Environmental Surveyor shall flag boundaries of habitats to be avoided and, if necessary, the construction work boundaries (Section 7.1.3, 14.). • The Environmental Surveyor must approve of activity prior to working in sensitive areas where disturbance to habitat may be unavoidable (Section 7.1.4, 25.).). • In the event SDG&E identifies a covered species (listed as threatened or endangered by the federal or state) of plant within the temporary work area (10-foot radius) surrounding a power pole, SDG&E would notify the USFWS (for Federal ESA listed plants) and CDFW (for California ESA listed plants) (Section 7.1.4, 28.). • The Environmental Surveyor shall conduct monitoring as recommended in the pre-activity study form (Section 7.1.4, 35.). • During the nesting season, the presence or absence of nesting species (including raptors) shall be determined by a biologist who would recommend appropriate avoidance and minimization measures (Section 7.1.6, 50).
Location	All construction areas within suitable habitat
Monitoring/Reporting Action	Qualified biologist will conduct pre-construction studies, flag or fence areas to protect species and implement mitigation consistent with SDG&E Subregional NCCP.
Effectiveness Criteria	Direct impacts to sensitive plant species are minimized by flagging sensitive areas, monitoring and implementing the provisions of the SDG&E Subregional NCCP.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Cultural Resources-2: Worker Training**
Measure Text	Proposed Project personnel shall receive training regarding the appropriate work practices necessary to effectively implement the APMs and mitigation measures, including the potential for exposing subsurface cultural resources, including human remains. Training shall be required for all personnel before construction commences and repeated for all new personnel before they begin work on the Project. This training program shall be submitted to the CPUC for approval at least 30 days before the start of construction and include procedures to be followed upon the discovery or suspected discovery of archaeological materials and human remains, consistent with the procedures set forth in Mitigation Measure Cultural Resources-1 and Cultural Resources-4.
Location	All work areas

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Category	Measure Requirement/Application
Monitoring/Reporting Action	The training program is provided to CPUC at least 30 days prior to construction and may be incorporated into the more encompassing SEAP for the Project. Verify all construction personnel receive training that includes cultural resources protocol prior to construction.
Effectiveness Criteria	All construction personnel are trained prior to the start of construction, and training is repeated as new personnel join the crew.
Status	
Review/Approval	
APM/Mitigation Measure Title	**APM CUL-1: Archaeological Monitoring**
Measure Text	A qualified archaeologist would attend preconstruction meetings, as needed, and a qualified archaeological monitor would monitor activities. The requirements for archaeological monitoring would be noted on the construction plans. The archaeologist's duties would include monitoring, evaluation of any finds, analysis of collected materials, and preparation of a monitoring results report conforming to Archaeological Resource Management Reports guidelines.
Location	Within areas of ground disturbance.
Monitoring/Reporting Action	Verify that a qualified archaeologist is present at preconstruction meetings with contractors regarding monitoring requirements during ground-disturbing work and the requirement for archaeological monitoring is noted on the construction plans.
Effectiveness Criteria	Construction activities are monitored by a qualified archaeologist who is capable of implementing the cultural resource mitigation measures contained in this MMCRP.
Status	
Review/Approval	
APM/Mitigation Measure Title	**APM CUL-2: Avoidance of Environmentally Sensitive Areas**
Measure Text	Known cultural resources that will be avoided would be demarcated as Environmentally Sensitive Areas. Construction crews would be instructed to avoid disturbance of these areas.
Location	Areas of known cultural resources
Monitoring/Reporting Action	Verify areas with known cultural resources are marked as Environmentally Sensitive Areas.
Effectiveness Criteria	Significant known cultural resources are avoided.
Status	
Review/Approval	
APM/Mitigation	**Mitigation Measure Fire-1: Final Fire Prevention Plan**

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Category	Measure Requirement/Application
Measure Title	
Measure Text	SDG&E shall prepare and adhere to a Final Fire Prevention Plan (a.k.a. "Fire Plan") specifically tailored for the Proposed Project. The Final Fire Plan shall include, among other provisions, requirements for carrying emergency fire suppression equipment on all construction and employee or contractor vehicles and equipment, restricting smoking and idling vehicles, and restricting construction during red flag warnings. The Final Fire Plan shall be submitted to CPUC for approval at least 30 days prior to construction. The Final Fire Plan shall, at a minimum, include all of the provisions of the Preliminary Draft Fire Plan (Appendix I) and the elements listed below: • During Project construction, SDG&E shall implement ongoing fire patrols during the fire season as defined each year by local, state, and federal fire agencies. These dates vary from year to year, generally occurring from late spring through dry winter periods. • During Red Flag Warning events, as issued daily by the National Weather Service, all construction and maintenance activities shall cease, with an exception for transmission line testing, repairs, unfinished work, or other specific activities which may be allowed if the facility/equipment poses a greater fire risk if left in its current state. A transmission line may be tested if the loss of another transmission facility could lead to system instability or cascading outages. • All construction crews and inspectors shall be provided with radio and cellular telephone access that is operational in all Proposed Project work areas and access routes to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction activities at each construction work site. All fires shall be reported to the fire agencies with jurisdiction in the area immediately upon discovery of the ignition. • All construction personnel shall be trained in fire-safe actions, initial attack firefighting, and fire reporting. All construction personnel shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats. All construction personnel shall be provided a hard hat sticker listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on hard hat stickers shall be updated and redistributed to all construction personnel, and outdated hard hat stickers destroyed, prior to the initiation of construction activities on the day the information change goes into effect.
Location	All project work areas
Monitoring/Reporting Action	The Final Fire Plan is submitted to the CPUC at least 30 days prior to construction and is revised to the approval of the CPUC.
Effectiveness Criteria	Fire prevention and suppression measures are properly implemented.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Fire-2: Maintain Emergency Access**
Measure Text	SDG&E and/or its contractors shall contact and coordinate with the MCAS Miramar Fire Department and applicable local fire departments (i.e., City of

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	San Diego and City of Poway) prior to construction to determine the appropriate amounts of fire equipment to be carried on construction vehicles and to coordinate fire suppression activities. SDG&E shall submit verification of its consultation with MCAS Miramar and local fire departments to CPUC at least 30 days prior to construction.
Location	All work areas near vegetation
Monitoring/Reporting Action	SDG&E submits verification of its consultation with MCAS Miramar and local fire departments to CPUC prior to construction.
Effectiveness Criteria	Vehicles are parked in approved areas and contain necessary firefighting equipment. SDG&E activities do not obstruct fire response efforts.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Fire-3: Water Tanks**
Measure Text	SDG&E and/or its contractors shall have water tanks and/or water trucks sited/available at active Project sites for fire protection during Project construction. Prior to construction, SDG&E and its contractors shall contact and coordinate with the MCAS Miramar Fire Department and applicable local fire departments (i.e., City of San Diego and City of Poway) to determine the appropriate minimum capacity and locations for the water tanks if water trucks are not used. SDG&E shall submit verification of its consultation with MCAS Miramar and local fire departments to CPUC at least 30 days prior to construction.
Location	Active project sites
Monitoring/Reporting Action	Records of consultation with MCAS Miramar and local fire departments are submitted to the CPUC.
Effectiveness Criteria	Water is available at active work areas for fire protection.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Geology-1: Geotechnical Investigation for Liquefaction**
Measure Text	The design level geotechnical investigations to be performed by SDG&E shall include investigations that assess the potential for liquefaction to affect the Project and all associated facilities, specifically at tubular steel pole locations in areas with potential liquefaction-related impacts. Where these hazards are found to occur, appropriate engineering design and construction measures shall be incorporated into the project designs as deemed appropriate by a California-licensed Geotechnical Engineer or Certified Engineering Geologist. Design measures that would mitigate liquefaction-related impacts could include construction of pile foundations, ground improvement of liquefiable zones, and incorporation of slack in cables to allow ground deformations without damage to structures. Study results and proposed solutions to mitigate liquefaction shall be provided to the CPUC for review and approval at least 60 days before final project design.

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Category	Measure Requirement/Application
Location	Structures within moderate or high potential for liquefaction
Monitoring/Reporting Action	SDG&E completes geotechnical investigations and submits them to the CPUC for approval at least 60 days prior to final project design. SDG&E to provide documentation confirming that the final design incorporates geotechnical investigation results.
Effectiveness Criteria	The geotechnical design measures necessary to mitigate for liquefaction are determined, incorporated into final design, and successfully implemented.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Geology-2: Geotechnical Investigation for Landslides**
Measure Text	The design-level geotechnical surveys conducted by SDG&E shall include slope stability analyses in areas of planned grading and excavation that cross and are immediately adjacent to hills and mountains. These surveys shall acquire data that shall allow identification of specific areas with the potential for unstable slopes, landslides, earth flows, and debris flows along the approved transmission line route and in other areas of ground disturbance, such as grading for access and spur roads. The investigations shall include an evaluation of subsurface conditions, identification of potential landslide hazards, and shall provide information for development of excavation plans and procedures. If the results of the geotechnical survey indicate the presence of unstable slopes at or adjacent to Project structures, appropriate support and protection measures shall be designed and implemented to maintain the stability of slopes adjacent to newly graded or re-graded access roads, work areas, and project structures during and after construction, and to minimize potential for damage to project facilities. These design measures shall include, but are not limited to, retaining walls, visquene, removal of unstable materials, and avoidance of highly unstable areas. SDG&E shall document compliance with this measure prior to the final project design by submitting a report to the CPUC for review and approval at least 60 days before construction. The report shall document the investigations and detail the specific support and protection measures that shall be implemented.
Location	Work areas with a moderate or high potential for landslides
Monitoring/Reporting Action	SDG&E completes geotechnical investigations and submits them to the CPUC for approval at least 60 days prior to construction. SDG&E to provide documentation confirming that the final design incorporates geotechnical investigation results.
Effectiveness Criteria	The geotechnical design measures necessary to mitigate for landslides are determined, incorporated into final design, and successfully implemented.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Geology-3: Assess Potential for Collapsible and Expansive Soils**
Measure Text	The design-level geotechnical surveys shall identify areas with potentially

Category	Measure Requirement/Application
	expansive or collapsible soils and include appropriate design features, including excavation of potentially expansive or collapsible soils during construction and replacement with engineered backfill, ground-treatment processes, and redirection of surface water and drainage away from expansive foundation soils. Studies shall conform to industry standards of care and American Society for Testing and Materials standards for field and laboratory testing. Study results and proposed solutions shall be provided to the CPUC for review and approval at least 60 days before construction. The report shall document the investigations and detail the specific support and protection measures that shall be implemented.
Location	All structures within collapsible and expansive soils
Monitoring/Reporting Action	SDG&E completes geotechnical investigations and submits to the CPUC for approval at least 60 days prior to construction. SDG&E to provide documentation confirming that the final design incorporates geotechnical investigation results.
Effectiveness Criteria	The geotechnical design measures necessary to mitigate for collapsible and expansive soils are determined, incorporated into final design, and successfully implemented.
Status	
Review/Approval	
APM/Mitigation Measure Title	**APM GEO-1: Seismic Standards**
Measure Text	Design and construction of overhead facilities would conform to CPUC General Order 95, industry practice, and SDG&E internal structural design requirements to minimize damage from seismic shaking.
Location	Along overhead segments
Monitoring/Reporting Action	SDG&E to provide documentation confirming design and construction of overhead facilities conforms to CPUC General Order 95, industry practice and SDG&E structural design requirements.
Effectiveness Criteria	Design and construction of overhead facilities will minimize damage from seismic shaking.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure GHG-1: Disposal of Organic Matter**
Measure Text	In accordance with requirements in Assembly Bill 1826, SDG&E shall dispose of organic waste (defined in PRC Section 42649.8(c) as food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste) removed on and after April 1, 2016 by means other than transporting to a landfill if the amount of organic waste meets or exceeds eight cubic yards per week. On and after January 1, 2017, SDG&E shall dispose of organic waste by means other than transporting to a landfill if the amount of organic waste meets or exceeds four cubic yards per week. Options for non-landfill disposal may include composting on

Category	Measure Requirement/Application
	previously disturbed SDG&E land, self-hauling organic waste for recycling, or participating in a greenwaste recycling program in accordance with subdivision (b) of AB 1826. SDG&E shall notify the CPUC of the disposal method at least 30 days prior to construction.
Location	All organic waste collection locations
Monitoring/Reporting Action	SDG&E to provide notification of organic waste disposal method to CPUC at least 30 days prior to construction.
Effectiveness Criteria	SDG&E complies with AB 1826.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Hazards-2: Spill Prevention, Control, and Countermeasure Plan**
Measure Text	As part of the Safety and Environmental Awareness Program (SEAP), SDG&E shall prepare a site-specific Spill Prevention, Control, and Countermeasure (SPCC) Plan for sites that are subject to the SPCC program (e.g., sites where the total aggregate capacity of aboveground oil storage containers exceeds 1,320 gallons) that will identify spill prevention and response measures, systems, and devices. The plan will emphasize site-specific physical conditions to improve hazard prevention (e.g., identification of flow paths to nearest water bodies). An SDG&E-designated representative shall be identified to ensure that all hazardous materials and safety plans are followed throughout the construction period. Best Management Practices (BMPs) identified in the project Stormwater Pollution Prevention Plan (SWPPP) and spill prevention and response measures identified in the SPCC Plan shall be implemented during project construction to minimize the risk of an accidental release and to provide the necessary information for emergency response. A copy of the project SEAP shall be submitted to the CPUC at least 30 days prior to construction. All construction personnel shall be required to attend SEAP training prior to conducting any work on the project site. Training attendance sheet(s) shall be submitted to the CPUC on a monthly basis.
Location	All work areas where oil (e.g., fuel oil) is stored in excess of 1,320 gallons in 55 gallon or larger containers.
Monitoring/Reporting Action	SDG&E shall submit a SPCC Plan to the CPUC at least 30 days prior to construction for sites that are subject to the SPCC program. SDG&E shall prepare and submit SEAP training materials to the CPUC at least 30 days prior to construction and shall submit attendance sheets to the CPUC on a monthly basis.
Effectiveness Criteria	Proper storage, handling, and spill containment and control measures are implemented as needed.
Status	
Review/Approval	

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Category	Measure Requirement/Application
APM/Mitigation Measure Title	**Mitigation Measure Hazards-3: Hazardous Substance Control and Emergency Response Plan**
Measure Text	SDG&E shall prepare and incorporate methods and techniques to minimize the exposure of the public to potentially hazardous materials during all phases of project construction and post-construction operation into a Hazardous Substance Control and Emergency Response Plan (HSCERP). The HSCERP shall be submitted to CPUC for recordkeeping at least 30 days prior to project construction. The HSCERP measures shall require implementation of appropriate control methods and approved containment (e.g., use of partial or total enclosures, hazardous material handling methods and employee training, ventilation requirements) and spill control practices for construction and on-site hazardous material storage. All hazardous materials and hazardous wastes shall be handled, stored, and disposed of in accordance with all applicable regulations by personnel qualified to handle hazardous materials. With the exception of wood poles, the plan shall specify that all hazardous materials shall be collected and stored in project-specific containers until they are transported to an appropriately licensed and permitted waste disposal facility. Wood poles shall be transported off site once removed from the ground and temporarily stored in project-specific containers at an SDG&E facility. As containers are filled, poles shall be transported to an appropriately licensed Class I landfill or the compost-lined portion of a solid waste landfill. The HSCERP measures shall also include, but not be limited to, the following: • Proper disposal of contaminated soils • Daily inspection of vehicles and equipment parking near sensitive resource areas during construction and spill containment procedures • Emergency response and reporting procedures to address hazardous material releases • Adequate operation and safety buffering and grounding measures • Fueling of any vehicles, equipment, and helicopters in staging yards or on streets paved with secondary containment and away from sensitive resource areas (e.g., preserves, designated open space areas, conserved habitat) The measures shall specify that emergency spill supplies and equipment shall be available to respond in a timely manner if an incident should occur. Response materials such as oil-absorbent material, tarps, and storage drums shall be available at the project site at all times during construction and shall be used as needed to contain and control any minor releases.
Location	All locations where hazardous materials are stored or handled and where construction vehicles and equipment are used
Monitoring/Reporting Action	SDG&E submits the HSCERP defining methods and techniques to minimize public exposure to hazardous materials at least 30 days prior to construction. Verify the HSCERP contains the minimum requirements listed in the measure.
Effectiveness Criteria	The exposure of the public to potentially hazardous materials is minimized.
Status	
Review/Approval	

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Category	Measure Requirement/Application
APM/Mitigation Measure Title	**Mitigation Measure Hazards-4: Uncover Existing Utility Pipelines**
Measure Text	SDG&E shall excavate ("pothole") to the top of any buried existing utilities, including pipelines, that are located within 10 feet of a proposed excavation (e.g., pole foundation, retaining wall footing, duct bank, or vault structure) to verify the location of the existing utility prior to initiating excavation work. Potholing work shall be performed using a non-destructive method (e.g., air vacuum extraction) that will not damage an existing pipeline once it is encountered. Potholing work shall be conducted under the oversight of a representative of the appropriate utility company. Potholing shall reveal the top of the pipeline only and shall not go any deeper than the top of the pipe so as to not damage the pipe in any way. Two potholes shall be excavated at each associated foundation location so that the orientation of existing pipelines can be verified. Potholes shall be backfilled with stockpiled soil once the location and orientation of the pipeline has been verified and marked. The utility company representative shall verify and approve that backfill and compaction of the potholes has been performed adequately. If the pipeline is located within the footprint of a proposed pole foundation, no pole foundation excavation work shall commence until SDG&E and CPUC have been notified and the pole location has been relocated sufficiently far away from the buried pipeline.
Location	Where excavation is located within 10 feet of a buried utility line
Monitoring/Reporting Action	Verify that potholing is properly implemented and underground utilities are properly marked. SDG&E and CPUC are notified of conflicts with utilities and proposed pole relocations.
Effectiveness Criteria	Buried utilities are avoided by the overhead transmission line structures and buried utilities are avoided or relocated along the underground transmission line.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Hazards-5: Soil and Groundwater Testing**
Measure Text	Soil samples shall be taken from representative sampling locations prior to construction excavation near any open hazardous materials site and shall be tested to determine the presence and extent of hazardous materials. The sampling and testing plan shall be prepared and conducted by an appropriate California licensed professional and sent to a California Certified laboratory. Soil and groundwater samples shall be tested at a California Certified Laboratory. A report documenting the areas proposed for sampling, and the process to be used for sampling and testing shall be submitted to the CPUC for review and approval at least 60 days before construction. Results of the laboratory testing and recommended resolutions for handling of excavation material found to exceed regulatory requirements shall be submitted to the CPUC 30 days prior to construction. In the event that soils to be excavated are found to be contaminated, the excavated soil shall be treated as hazardous materials and disposed of in compliance with state and federal regulations and SDG&E operational procedures. Effective dust suppression procedures will be used in construction

Category	Measure Requirement/Application
	areas to reduce airborne emissions of these contaminants and reduce the risk of exposure to workers and the public. Regulatory agencies for the State of California (DTSC or RWQCB) and San Diego County shall be contacted by SDG&E or its contractor to plan handling, treatment, and/or disposal options.
Location	Areas of known hazardous materials sites
Monitoring/Reporting Action	A soils and groundwater testing plan is submitted to the CPUC for approval at least 60 days prior to construction. Testing results and recommended resolutions submitted to CPUC at least 30 days prior to construction. Verify representative sampling and testing has been completed on soils within open hazardous materials sites. Verify agencies are appropriately notified if hazardous materials are encountered.
Effectiveness Criteria	All contaminated soils are properly excavated and disposed of in accordance with state and federal law.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Hazards-6: Unexploded Ordnance Investigation**
Measure Text	As part of the NEPA review and Tier 1 application process required for construction within MCAS Miramar, SDG&E shall comply with Naval Sea Systems Command (NAVSEA) OP 5 safety requirements for shore-based operations. SDG&E shall perform a survey of identified Formerly Used Defense Sites (FUDS) database sites prior to the start of construction to identify potential unexploded ordnance locations. SDG&E shall obtain a trained contractor for the pre-construction survey, personnel training, and removal of all unexploded ordnance that are found in the Project area. An unexploded ordnance investigation of known and potential areas used by the military along the ROW shall be undertaken by a trained contractor. If unexploded ordnance are found, they shall be removed by the trained contractor. To comply with NAVSEA OP 5 requirements, all personnel involved in excavation, grading, or ROW clearing shall be educated by the trained contractor to recognize unexploded ordnance.
Location	All project locations that have the potential for discovery of unexploded ordnance hazards (work areas within MCAS Miramar)
Monitoring/Reporting Action	Verify investigation for potential unexploded ordnance locations has been performed and workers have been properly trained to recognize unexploded ordnance.
Effectiveness Criteria	Unexploded ordnance from work areas and vicinity are safely removed.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Hazards-7: Induced Current Touch Study**
Measure Text	SDG&E shall identify both aboveground and underground objects (e.g., metal fences or buried metal utility lines) in the vicinity of the proposed 230-kV transmission line that may potentially present a shock hazard to the public,

Category	Measure Requirement/Application
	due to induced currents or voltages. SDG&E shall prepare an Induced Current Touch study that evaluates the conductive and inductive interference effects of the proposed 230-kV transmission line on the identified objects. The Induced Current Touch study shall model the conductive objects using the maximum anticipated voltage for the proposed 230-kV line and shall consider the construction details for the transmission line. The study shall also construct a model using fault conditions. The maximum acceptable touch voltage under steady-state conditions is 15 volts and the threshold for fault conditions is specified in ANSI/IEEE Standard 80. In the event that the modeled induced current voltage of a conductive objective exceeds maximum touch voltage thresholds, SDG&E shall install grounding or other appropriate measures to protect the public from hazardous shocks. The Induced Current Touch study shall include the model voltage results of conductive objects prior to implementation of grounding measures and after implementation of grounding measures. 60 days prior to commencing construction, SDG&E shall provide the Induced Current Touch study to the CPUC, for review. The Induced Current Touch study shall include the criteria and approach that was used to determine what facilities could present a shock, the results of the model prior to implementation of grounding measures, details of the grounding or other measures to be installed, and the results of the model after implementation of the grounding measures.
Location	All aboveground and underground transmission lines in the vicinity of underground conductive objects
Monitoring/Reporting Action	The Induced Current Touch study is provided to the CPUC for review at least 60 days prior to construction.
Effectiveness Criteria	Touch voltage does not exceed ANSI/IEEE Standard 80 (15 volts under steady state conditions).
Status	
Review/Approval	
APM/Mitigation Measure Title	**APM HAZ-1: Safety and Environmental Awareness Program**
Measure Text	SDG&E will prepare a Safety and Environmental Awareness Program (SEAP) for project personnel. The SEAP may include training for relevant topics such as: • General safety procedures • General environmental procedures • Fire safety • Biological resources • Cultural resources • Paleontological resources • Hazardous materials protocols and BMPs • SWPPP
Location	All work areas
Monitoring/Reporting Action	SDG&E shall prepare a SEAP. Verify the SEAP includes all necessary training topics and workers receive training prior to construction.

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Category	Measure Requirement/Application
Effectiveness Criteria	All personnel receive safety and environmental awareness training.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Hydrology-1: SWPPP and Treatment of Shallow Groundwater Discharge**
Measure Text	SDG&E shall prepare a Stormwater Pollution Prevention Plan in compliance with the State Water Resources Control Board (SWRCB) Construction General Permit CAS000002 (Order No. 2012-0006-DWQ) and City of San Diego Stormwater Standards Manual (2012). Project construction plans and the SWPPP shall be submitted to the CPUC and the City of San Diego for review and approval prior to construction. The SWPPP shall address erosion and sedimentation control, groundwater dewatering procedures, hazardous materials identification, handling, disposal and emergency spill procedures, and any other best management procedures necessary to prevent sediment or contaminants from entering Los Peñasquitos Creek. Groundwater extracted during construction dewatering shall not be discharged to any surface waters or storm drains. If dewatering is necessary, the water shall either be used: (i) to irrigate upland areas, (ii) for dust control, or (iii) as makeup for a construction process (e.g., concrete production). If dewatering of contaminated groundwater is necessary, the water shall be disposed of in accordance with all applicable laws and procedures described in the SWPPP.
Location	All project work areas
Monitoring/Reporting Action	SDG&E prepares the SWPPP in compliance with the SWRCB Construction General Permit, and the CPUC and City of San Diego approve the SWPPP prior to construction
Effectiveness Criteria	Sediment and erosion is controlled in compliance with the Project's SWPPP. Groundwater dewatering and spill clean-up procedures comply with all applicable laws.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Hydrology-5: Protection from Scour**
Measure Text	At locations where the buried power line is to be at or adjacent to a stream bed capable of scour, the power line shall be located below the expected depth of scour from a 100-year flood, or otherwise protected from exposure by scour which, for purposes of this mitigations measure, also includes lateral (streambank) erosion and potential scour associated with flows overtopping or bypassing a culvert or bridge crossing. During final design, a registered civil engineer with expertise in hydrology, hydraulics, and river mechanics shall make a determination of where the underground line could be at risk of exposure through scour or erosion from a 100-year event. Plans for burying the line below the 100-year scour depth, or otherwise protecting the line from erosion, shall be submitted to CPUC for review and approval prior to construction.

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Category	Measure Requirement/Application
Location	Underground transmission line crossings of streams within 100-year flood zone
Monitoring/Reporting Action	SDG&E to submit documentation to CPUC for approval prior to construction confirming that final design incorporates recommendations of civil engineer with expertise in hydrology, hydraulics, or river mechanics for buried transmission lines near streams within the 100-year flood zone.
Effectiveness Criteria	Underground transmission line is located at sufficient depth to prevent scour.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Noise-1: Resident Notification and Complaints**
Measure Text	SDG&E shall provide notice by mail at least 1 week prior to construction activities to all sensitive receptors and residences within 500 feet of construction sites, staging yards, and access roads, and within 1,000 feet of helicopter fly yards and flight paths. SDG&E shall also post notices in public areas, including recreational use areas, within 300 feet of the project alignment and construction work areas. The announcement shall state where and when construction will occur in the area. For areas that would be exposed to helicopter noise, the announcement shall provide details on the schedule of the dates, times, and duration of helicopter activities. Notices shall provide tips on reducing noise intrusion, for example, by closing windows facing the planned construction. SDG&E shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring receptors, including residents, about noise construction disturbance. SDG&E shall also establish a toll-free telephone number for receiving questions or complaints during construction and develop procedures for responding to callers. Procedures for reaching the public liaison officer via telephone or in person shall be included in the above notices and also posted conspicuously at the construction site(s). SDG&E shall address all complaints within 1 week of when the complaint is filed. SDG&E shall provide monthly reports with records of complaints and responses to the CPUC. These reports shall be provided to CPUC within 15 days of the end of the month.
Location	All areas within 1,000 feet of a helicopter fly yard and within 500 feet of construction work areas
Monitoring/Reporting Action	Verify residents and sensitive receptors were notified at least 1 week prior to start of construction and that all notifications are properly posted.
Effectiveness Criteria	Residents are successfully notified prior to start of construction and are provided information to reduce noise intrusion and impacts.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Paleontology-2: Note Monitoring Areas on Plans**
Measure Text	All project areas that would require paleontological monitoring shall be noted on construction drawings and plans. A CPUC-approved, qualified

Category	Measure Requirement/Application
	paleontologist shall attend pre-construction meetings, as needed, to consult with the excavation and grading contractor concerning the schedule for excavations and other surface disturbance, paleontological field techniques, and safety issues.
Location	Locations requiring paleontological monitoring
Monitoring/Reporting Action	Verify paleontological monitoring areas are noted on construction drawings and plans. Verify paleontologist attends pre-construction meetings to consult with excavation and grading contractor.
Effectiveness Criteria	Identification and preliminary evaluation of paleontological resources within areas of sensitivity.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Recreation-1: Pre- and Post-Construction Report**
Measure Text	Prior to the start of construction, SDG&E shall prepare a Preconstruction Parks and Trails Condition Report that documents the existing condition of project work areas in preserves and parks (e.g., Black Mountain Ranch Community Park, Sycamore Canyon Park, Los Peñasquitos Canyon Preserve), and where multi-use trails are present in work areas, including both designated trails and unofficial trails along access roads. At a minimum, the report shall include text descriptions and accompanying photographs for each resource located in a work area. The Preconstruction Parks and Trails Condition Report shall be submitted to the CPUC no less than 30 days prior to construction. See post-construction requirements for repair of damaged parks and trails and preparation of a Post-Construction Parks and Trails Restoration Report.
Location	Locations where construction will occur within parks, preserves, multi-use trails and unofficial trails along access roads
Monitoring/Reporting Action	Preconstruction Parks and Trails Condition Report submitted to the CPUC at least 30 days prior to construction.
Effectiveness Criteria	Any damage to trails or park recreational resources is repaired to pre-construction conditions.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Recreation-3: Maintain Access to Recreational Facilities**
Measure Text	SDG&E shall coordinate the temporary closure of any public baseball or soccer fields and parking spaces with the City of San Diego and authorized park officer at least 90 days prior to construction within a park to avoid peak use of the facilities. SDG&E shall maintain a safe pedestrian access path between the parking lot and baseball fields during construction.
Location	Locations where activities are conducted within or adjacent to public

Category	Measure Requirement/Application
	recreational facilities
Monitoring/Reporting Action	Verify SDG&E coordinates with the City of San Diego regarding temporary park closures.
Effectiveness Criteria	SDG&E will successfully coordinate park closures with the City of San Diego to minimize impacts on peak recreational use periods. Safe pedestrian access between parking lots and baseball fields will be maintained.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Traffic-1: Construction Transportation Management Plan**
Measure Text	SDG&E shall develop and implement a project-specific Construction Transportation Management Plan (CTMP). SDG&E shall submit the plan to CPUC for review and approval at least 30 days prior to construction. The CTMP shall conform to the California Joint Utility Traffic Control Committee's Work Area Protection and Traffic Control Manual. The CTMP shall include provisions for the following: • Implementation of standard safety practices, including installation of appropriate barriers between work zones and transportation facilities, placement of appropriate signage, and use of traffic control devices. • Use of flaggers and/or signage to guide vehicles through or around construction zones using proper techniques for construction activities including staging yard entrance and exit. • Alternate traffic routes and the use of construction personnel carpools or shuttles to avoid roads that are operating at LOS D or lower. • Traffic detours for any road or lane closures with appropriate signage marking the detours. • Timing of worker commutes and material deliveries to avoid peak commuting hours. • Timing of lane and road closures. • Locations that would be accessed and receive material deliveries via helicopter. • Plans for construction worker parking and transportation to work sites • Methods for keeping roadways clean. • Storage of all equipment and materials in designated work areas in a manner that minimizes traffic obstructions and maximizes sign visibility. • Limiting of vehicles to safe speed levels according to posted speed limits, road conditions, and weather conditions. • Coordination with public transit providers. • Routing of trucks to avoid minor roads, where possible, to reduce congestion and potential asphalt damage. • Repair of asphalt and other road damage (e.g., curb and gutter damage, rutting in unpaved roads) caused by construction vehicles. • Detours for cyclists and pedestrians when bike lanes or sidewalks must be closed. • Abiding by encroachment permit conditions, which shall supersede conflicting provisions in the CTMP.

Category	Measure Requirement/Application
	The CTMP must at a minimum comply with the requirements of the appropriate City and must be submitted to the respective cities for review and approval at least 60 days prior to commencing construction activities.
Location	All areas of lane or road closures and roads with heavy construction vehicle use
Monitoring/Reporting Action	The CTMP is submitted to the CPUC for review and approval at least 30 days prior to construction.
Effectiveness Criteria	Traffic impacts and hazards are minimized through appropriate traffic control measures.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Traffic-2: Congested Area Plan**
Measure Text	Prior to construction, helicopter contractors shall coordinate helicopter activities for the project with the regional FAA office and obtain any required approvals to operate helicopters. FAA coordination shall include submittal of a Congested Area Plan prepared by the helicopter operator to obtain approval for the helicopter operations for all routes that would cross over "congested areas" as described in 14 CFR 133.33. The Congested Area Plan will identify anticipated work dates, a detailed description of the work to be performed, any safety hazard control measures that are required, and appropriate emergency procedures and emergency landing area(s). Helicopter contractors shall provide the CPUC with all required approvals, documents, and conditions of work prior to conducting helicopter activities for the project.
Location	All areas of helicopter activities
Monitoring/Reporting Action	Helicopter contractors shall provide the CPUC with required documentation, including a Congested Area Plan, prior to conducting helicopter activities.
Effectiveness Criteria	Air traffic hazards and conflicts are reduced through proper planning and coordination with FAA.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Traffic-3: Post-Construction Road Repair**

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Category	Measure Requirement/Application
Measure Text	Prior to construction, SDG&E shall conduct a pre-construction road condition assessment along the underground transmission line route[1] and entrances and exits to all staging yards. SDG&E shall submit the pre-construction road condition assessment to the CPUC and the local jurisdiction (e.g., City of San Diego or City of Poway). If damage to roads occurs as a result of project construction or construction vehicle traffic, SDG&E shall restore damaged roadways within 60 days after the completion of construction at their own expense under the direction of and to the construction standard of the affected local jurisdiction to ensure that impacted roads are adequately repaired.
Location	Along underground transmission line routes, and entrances and exits to all staging yards
Monitoring/Reporting Action	SDG&E submits pre-construction road condition assessment to the CPUC and local jurisdiction.
Effectiveness Criteria	Impacted roads are repaired to pre-existing conditions.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Traffic-4: Temporary Traffic Control Measures**
Measure Text	Prior to conductor stringing, SDG&E shall determine whether a temporary road closure or temporary support measures to protect traffic, such as guard structures or netting across roadways that would catch and support the conductor above traffic, would be necessary in the event that tension control of the conductor is lost during installation. The selected temporary measures to be incorporated shall be identified on construction plans and installed by SDG&E in advance of construction and shall remain in place until the conductor is clipped into support hardware on the transmission line structures. SDG&E shall implement all traffic control procedures and measures defined in Mitigation Measure Traffic-1 during installation of temporary support measures or temporary road closure.
Location	Where conductor stringing will occur
Monitoring/Reporting Action	Temporary conductor stringing mitigation measures including netting and guard structures shall be identified on construction plans.
Effectiveness Criteria	Guard structures or netting prevents conductor from falling on vehicles or pedestrians during constructor stringing activities.
Status	

[1] The original measure stated Carmel Valley Road because the Proposed Project only included underground transmission line within Carmel Valley Road. The measure was intended to apply to all roads with underground transmission line within the selected alternative.

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PRE-CONSTRUCTION MITIGATION MEASURES TRACKING TABLE

Category	Measure Requirement/Application
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Traffic-5: Highway Closure Plans**
Measure Text	SDG&E shall prepare and submit to Caltrans closure plans as part of the encroachment permit application at least 30 days prior to crossings of SR-56 and I-15. The plans shall require that closure or partial closure of SR-56 and I-15 be limited to off-peak, non-daytime hours, from 10 PM to 5 AM, and that signage be posted prior to the closure to alert drivers of the closure in accordance with Caltrans requirements. Highway closure times will be reviewed and approved by Caltrans to minimize delay to SR-56 and I-15 traffic. The plan shall also outline suggested detours to use during the closures, traffic, including routes and signage. No work shall begin in Caltrans right-of-way until the encroachment permit and Highway Closure Plan are approved by Caltrans. Should emergency evacuation occur prior to or during the highway closure, the closure shall be delayed or ceased to allow unimpeded flow of traffic.
Location	Overhead crossing of I-15
Monitoring/Reporting Action	SDG&E submits closure plan to Caltrans and provides approved encroachment permit and closure plan to the CPUC prior to construction.
Effectiveness Criteria	The closure is implemented to minimize traffic impacts on I-15.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Traffic-12: Consult with Bus and Transit Services**
Measure Text	SDG&E shall consult with the San Diego Metropolitan Transit System and City of San Diego School District at least one month prior to construction to coordinate construction activities adjacent to bus stops. If necessary, bus stops will be temporarily relocated or buses will be rerouted until construction in the vicinity is complete. SDG&E shall post notices of any temporary bus stop closure at least 14 days prior to temporary closure. The notices shall provide information on the nearest available bus stop on the bus route and the scheduled duration of closure.
Location	Where construction activities are adjacent to bus routes
Monitoring/Reporting Action	Verify SDG&E has coordinated with San Diego Metropolitan Transit System and City of San Diego School District at least 1 month prior to construction.
Effectiveness Criteria	Construction activity will be coordinated adjacent to bus stops to minimize impacts on access to public transportation.
Status	
Review/Approval	
APM/Mitigation Measure Title	**APM TR-4: Encroachment Permits**
Measure Text	SDG&E will obtain the required encroachment permits from the City of San

Category	Measure Requirement/Application
	Diego for crossings at city streets and Caltrans for work near I-15 and Hwy 56, and will ensure that proper safety measures are in place while construction work is occurring near public roadways. These safety measures include flagging, proper signage, and orange cones to alert the public to construction activities near the roadway.
Location	All work locations within City of San Diego streets and Caltrans ROW
Monitoring/Reporting Action	SDG&E provides approved encroachment permits to the CPUC.
Effectiveness Criteria	Encroachment permits are obtained and safety measures are successfully implemented.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Utilities-1: Non-Potable Water Use for Dust Control**
Measure Text	The water supply for project construction activities (e.g., dust control, soil compaction) shall be obtained from non-potable sources and ensured in a water contract through a local water agency or district, except where jurisdictional or regulatory requirements restrict the use of non-potable water for a specified construction activity or during limited periods when non-potable water sources are offline and not available. SDG&E shall provide verification that water will be obtained from a non-potable source, or verification of the specific circumstances, requirements, and time frame during which potable water will be used, to the CPUC, a minimum of 60 days prior to the start of construction.
Location	All areas of earth disturbance
Monitoring/Reporting Action	SDG&E shall provide verification of the non-potable water source, or specific circumstances during which potable water will be used to the CPUC at least 60 days prior to construction.
Effectiveness Criteria	Non-potable water is used to the extent feasible.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Utilities-3: Notify Utility Companies and Adjust Underground Work Locations**
Measure Text	SDG&E shall notify all utility companies with utilities located within or crossing SDG&E ROW and franchise agreement area to locate and mark existing underground utilities along the entire length of the alignment at least 30 days prior to construction. No subsurface work shall be conducted that would conflict with (i.e., directly impact or compromise the integrity of) a buried utility. In the event of a conflict, the project underground alignment shall be realigned vertically and/or horizontally, as appropriate, to avoid other utilities and provide adequate operational and safety buffering. In instances where separation between City of San Diego sewer mains and the underground duct bank alignment is less than 10 feet, SDG&E or its contractor shall submit the intended construction methodology to the City of San Diego Public Utilities

Category	Measure Requirement/Application
	Department Water and Sewer Development Section for review and comment at least 30 days prior to construction. Construction methods shall be adjusted as feasible, safe and consistent with good utility practice to assure that the integrity of existing sewer mains is not compromised.
Location	Areas of excavation or subsurface work
Monitoring/Reporting Action	SDG&E shall notify utility companies with utilities within or crossing SDG&E ROW prior to construction. Where the transmission line alignment will be located less than 10 feet from existing City of San Diego sewer mains, SDG&E shall submit construction plans and methodology to City of San Diego for review and comment at least 30 days prior to construction.
Effectiveness Criteria	Direct impacts to buried utility lines are avoided and the integrity of existing buried utilities is maintained.
Status	
Review/Approval	
APM/Mitigation Measure Title	**Mitigation Measure Utilities-4: Cathodic Protection**
Measure Text	SDG&E shall prepare an AC interference study that evaluates the AC interference effects of the proposed 230-kV transmission line on nearby parallel metallic pipelines. The study shall construct a model using the maximum anticipated voltage for the proposed 230-kV transmission line and shall consider the construction details for the transmission line, including conductor arrangement. In addition, SDG&E shall identify utility facilities in the vicinity of the proposed 230-kV transmission line that may be susceptible to corrosion due to induced currents or voltages. For all utilities identified with a corrosion potential, SDG&E shall coordinate with the owner of the utility and use data gathered in the AC interference study to determine appropriate design measures to protect the utility from corrosion such as ground mats or gradient control wires for cathodic protection of the buried utility pipelines. The study, summary of coordination with potentially affected utilities, and details of any design measures to be installed shall be submitted to the CPUC for review and approval at least 60 days prior to initiation of construction.
Location	Along the transmission line alignment
Monitoring/Reporting Action	SDG&E shall prepare an AC interference study for CPUC review and approval at least 60 days prior to construction.
Effectiveness Criteria	The AC interference study is prepared, approved, and successfully implemented to prevent corrosion.
Status	
Review/Approval	
APM/Mitigation Measure Title	**APM PS-2: Notification of Construction**
Measure Text	SDG&E will provide the public with advance notification of construction activities. Concerns related to dust, noise, and access restrictions with construction activities will be addressed within this notification.

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Category	Measure Requirement/Application
Location	All work areas
Monitoring/Reporting Action	SDG&E notifies the public within 1,000 feet of Project work areas by public notice mailer of construction activities prior to construction.
Effectiveness Criteria	The public is notified in advance of construction activities.
Status	
Review/Approval	